

The Norwegian Petroleum Fund: Savings for Future Generations?

Abstract

The Norwegian state-owned Petroleum Fund's market value is more than one trillion US dollars. The Norwegian state has become one of the world's largest stockowners. The Fund was established in 1990 and in 2006 it was renamed the 'Government Pension Fund Global', as savings for future generations. What kind of values form the basis for describing the Petroleum Fund in this way? This article shows that the idea that present generations should not empty the North Sea of oil and gas without saving something for future generations has been stable since the 1970s. However, over time, the understanding of how to save has changed. More specifically, experts, bureaucrats and politicians have shifted their arguments during four phases: moderation in oil extraction (1974 – 1983); introduction of the national wealth model (1984-1990); a financial fund for the present and the future (1991 – 2006) and increased income and new protests (2007 – 2019). These four periods show that over time the idea of weak sustainability and value commensurability have increasingly come to dominate the argumentation in public documents about the Petroleum Fund.

Keywords:

Norway, Petroleum Extraction; Intergenerational Transfers; Compensation; Sovereign wealth funds

1. Introduction

Since Phillips Petroleum first found oil in the Norwegian sector of the North Sea in 1969, Norwegian politicians have ensured the state gathers a large part of the income from petroleum production. The government established the state-owned Petroleum Fund of Norway and has regularly transferred capital from oil revenues to this fund. The fund's market value is more than one trillion US Dollars (NBIM 2019a). This corresponds to more than twice the Norwegian GDP and around 200,000 US Dollars per capita (Norwegian Petroleum 2019a). Through the fund, the Norwegian state has become one of the largest stockowners in the world.

In 2006, the government changed the Fund's name to the Government Pension Fund Global (GPFG). It thereby sent signals to the population that it had long-term goals for the use of petroleum revenues. Moreover, the government's reports to parliament state that oil revenues represent a non-renewable natural resource, and savings in the fund aim to distribute this resource across generations (Report 26, (2016-2017): 113).

The Ministry of Finance (2018) presents petroleum wealth as a legacy of nature that belongs to all generations. The Norwegian Bank Investment Management (NBIM), which is responsible for the management of the fund, writes on its webpage:

The aim of the oil fund is to ensure responsible and long-term management of revenue from Norway's oil and gas resources in the North Sea so that this wealth benefits both current and future generations. The fund's formal name is the Government Pension Fund Global (NBIM 2019a).

What kind of values form the basis for describing the Petroleum fund as savings for future generations? What scope of actions can such savings give those who come after us? Perhaps, expressions such as savings for future generations, or that oil revenues will benefit future generations, should be understood as forms of responsibility towards future generations. The question then arises as to what constitutes that responsibility?

These questions are particularly important because the coronavirus led to a stock market crash in March 2020. This crash shows the uncertainty in financial investments as savings for future generations.

Over the last three decades, an increasing number of legislative and policy measures have included an obligation to safeguard the wellbeing of future generations (UN 2013; World Future Council 2008; 2018; Jones et al. 2018). Parallel to these measures, there are academic discussions about the meaning of responsibility towards future generations (e.g. Spash 2002; Aguis et al., 2013; Sen 2013; Lawrence 2014; Koch and Mont 2016; Gough 2017; Caney 2018). In both political and academic debates various conceptions of sustainable development are used to analyse what constitutes this responsibility. A vast body of literature has specified this concept in different directions, and one main distinction is between weak and strong sustainability (Figue 2005; Howart 2017). In the perspective of weak sustainability natural capital (e.g. fossil fuel, water, air) and human-made capital (e.g. buildings, machines, financial assets) are essentially substitutable. What matters is the total monetary value of the aggregate stock of capital, which should at least be maintained for the sake of future generations. In contrast, according to strong sustainability this substitutability is impossible, or strictly limited, due to the existence of critical elements that natural capital provides for human existence and wellbeing (Gough 2017). A central aspect of these different views on sustainability concerns value commensurability, and whether money as measurement can capture all the different values at stake (O'Neill 2017). I will return to this in section two.

In this article I trace the legitimisation of the establishment and management of the Petroleum Fund from the early 1970s until 2018. I apply what Bratberg (2017) defines as idea analysis, in which the aim is to analyse what kind of normative and descriptive understandings lay the foundation for political decisions. This implies not

only analyses of statements at key moments of choice, but also of continuity and change over time (Jacobs 2015). Document analysis is employed to assess how experts, bureaucrats and politicians reason and which political and normative assessments they make regarding the fund. This includes examining Norwegian public reports written by experts participating in government appointed commissions (NOU), government white papers presented to parliament (termed parliamentary reports St. Meld., also known as Meld. St. as of 2009), and Acts the government presents for the parliament (known as Prop. L., also known as Ot. Prp. as of 2009), which lead to majority decisions in parliament. This article is neither meant to be a historical analysis of the fund, nor does it include assessments of the fund in Norwegian society (see Lie 2012; Lie et al. 2016; Overland 2018). I concentrate on public documents dealing with the fund.

In the following section I elaborate on the theoretical conceptions of responsibility towards future generations. The third section gives a short presentation of the Norwegian Petroleum Fund followed by empirical analysis divided into four time periods: moderation in oil extraction (1974 – 1983); introduction of the national wealth model (1984 - 1990); a financial fund for the present and the future (1991 – 2006) and increased income and new protests (2007 – 2019). The fourth section summarises and concludes.

2. Responsibility towards future generations

The growing scholarly literature on future generations is intertwined with the rising knowledge of the global limits of many natural resources and environmental degradation (Page 2006; Caney 2018). Behind this attention is a worry about highly problematic consequences if present generations transfer irreversible environmental damages to individuals who will be born in the future (e.g. Tremmel 2009; Taylor 2017; Caney 2018). While climate change is the current headline issue, biodiversity is also gaining increased importance (IPCC 2018; IPBES 2019). The increasing awareness of how present harm to the environment will have adverse consequences for the quality of life in the future enhances the visibility and importance of this (Büchs and Koch 2017). Scholarly literature has emphasised that any use of natural resources needs to be assessed in relation to what one leaves to future generations, and that the contemporary way of life in large parts of the world will lead to escalating global environmental damage (Page 2006; Connelly et al. 2012; Koch and Mont 2016; Maxton and Randers 2016; Gough 2017).

However, responsibility towards future generations concerns not only scarce natural resources and environmental degradation, but also economic and political dimensions. The ability to develop a fair and functioning world-economy will affect the standard of living in the future. One concern is how one generation's national account budget deficits might inflict considerable disadvantages on subsequent generations (Auerbach et al. 1999; Graeber 2011). Another concern is how current generations transfer stable legal and political institutions to the coming generations. For example,

under Rawlsian contractarian theory this is a prerequisite for being able to overcome challenges that may arise in the future (Rawls 1971: 284-310). While there is an increasing awareness that what the current generation does is decisive for the existence and wellbeing of future generations (Davidson 2019), there is no common agreement about what constitutes that responsibility.

Weak and strong sustainability

Against this background, different conceptions of sustainable development would give a varied scope of actions to those who come after us. While the main distinction in the scholarly literature is between weak and strong sustainability, this is not a clear-cut distinction. There are various types of weak and strong sustainability and many differences are discussed at a more detailed level (Beckerman 1994; Figge 2005). However, of particular interest for this article are the different perceptions of substitutability between natural and human-made capital, and the consequences for the forms of savings for future generations. This concerns the question of value commensurability and whether money as a measure can capture the various values at stake concerning natural resources (O'Neill 2017).

The basic idea behind the concept of weak sustainability is that natural capital and other types of capital (mainly human-made capital) are substitutable. This requires all forms of capital to be converted into an equivalent value, with money serving as an universal measure for valuation. A common unit of measurement is seen as useful to gauge the relative importance of natural resources in relation to other goods and services. The use of natural capital can be measured and substituted by an increase in human-made capital. Sustainable development is achieved when the total value of the aggregate stock of capital is maintained, or ideally increased, for future generations (Figge 2005; O'Neill 2017). From this perspective, the current generation's responsibility towards future generations consists of providing that the following generations have at least as much natural or human-made capital at its disposal as itself.

In contrast, strong sustainability is based on the idea that the substitutability of natural capital and other forms of capital is strictly limited. The argument is that there is a qualitative difference between natural capital and human-made capital. Natural capital determines the ecosystem's capacity and cannot be viewed as a mere stock of resources (Gough 2017). The consumption of natural capital is irreversible, and one cannot be sure of the effects for future generations due to destroying the environment (Figge 2005; Habib 2013). Moreover, human-made capital requires natural capital for its production and can thus never be a complete substitute for natural capital. The different forms of capital are complements. Accordingly, what constitutes the current generation's responsibility towards future generations is to conserve the irreplaceable stocks of critical natural capital.

What should be saved?

Today's global environmental damages will presumably lead to a situation where the coming generations receive an inheritance from their predecessors they do not voluntarily agree upon (Lawrence 2014). Related to the question of what kind of values form the basis for saving, it is crucial to discuss whether the current generation can use non-renewable resources as long as future generations will have access to human-made capital in compensation. From the perspective of weak sustainability, an increase of future consumption is an appropriate compensation for losses of natural capital. The argument is that the current generation's use of non-renewable resources can be compensated via improved technology and increased capital investments (Langhelle and Ruud 2011). Such compensation is based on the idea of value commensurability with monetary valuation of various forms of capital (O'Neill 2017). The aim is to provide support for economic welfare for future generations.

This approach to compensation is narrow and lacks a fundamental normative basis for the current generation's responsibility (Spash 1994; O'Neill 2017). To broaden the perspective Spash (2002: 226-231) makes a distinction between basic transfers for maintaining future generations and compensatory transfer for harm. He argues that if the current generation inflicts substantive harm upon future generations a separate ethical case for transfers exists on grounds of compensation. The argument is that basic transfers being provided on grounds of general rules of distributive justice is not an adequate basis for compensation for harm. Compensation for injury is a separate moral issue from concerns over welfare distribution (Spash 2002: 226-231).

In terms of strong sustainability, the demand is that the environment itself is distributed, or saved for future generations, rather than the monetary value of the environment. While the argument that the current generation should preserve every aspect of nature seems untenable (Beckerman 1995), according to most conceptions of strong sustainability not all ecosystems everywhere have to be sustained exactly as they are (Figge 2005; Howarth 2017). Certain elements of natural capital are critical due to their unique contribution to human existence and wellbeing and cannot be treated as just another commodity in the marketplace (Claro 2007; O'Neill 2017). Moreover, instead of sharing the natural environment by parts (like a pie), Habib (2013) suggests a turn-based approach to distributing the environment. What the current generation owes future generations is a fair turn with nature, rather than all of the parts of it (Habib 2013). This implies that the living generations benefit from the actions made by the previous generations and are responsible for handing over functioning ecological systems to the following generations (Page 2006: 115; Tremmel 2009; Davidson 2019). A minimum compensation for depletion of fossil fuels or damages made to the environment would require that ecological systems are maintained in such a way that future generations can meet their needs.

What future generations need

We know what future generations will need in some basic terms. However, we have limited knowledge of their preferences and technological abilities. It can therefore be useful to draw on literature discussing what wellbeing means for the current generation and by association forecast what will be important for people in the future (Büchs and Koch 2017). More specifically here I use two theoretical approaches: Amartya Sen's (2009; 2013) capabilities approach and Ian Gough's (2017) theory on universal human needs.

Sen's point of departure is sustainable development as defined by the Brundtland report (1987: 41): *development that meets the need of the present without compromising the ability of future generations to meet their own needs*. He criticises its emphasis on conserving the ability of each generation to meet its respective needs. In contrast, Sen (2013: 11) proposes a freedom-oriented view, in which we focus on the enhancement of human capability. One central concern for Sen (2013) is that we see human beings as agents who can think and act, not just as patients who have needs that require satisfying. This means each generation should be given the freedom and possibility to evaluate and identify its own wants.

Gough (2017) asserts Sen's capability approach is difficult to operationalise, and therefore leaves scant protection for future generations. His essential premise is that all individuals around the world have certain basic common needs, which must be met so as to avoid harm, to participate in society and to reflect critically. Gough (2017: 45-47) argues that needs should be given priority over preferences as they imply ethical obligations on individuals and claims of justice on social institutions. This way of defining universal needs makes it, according to Gough (2017), possible to plan for and measure progress towards social and environmental goals. Even though needs might be defined universally, they are satisfied in different ways both across cultures and time. To solve this theoretically, Gough (2017) introduces a form of procedural rationality as a way of identifying need satisfiers, which are adapted to particular social settings.

Environmental policy requires political institutions to recognise that values are plural and incommensurable. This involves deliberative institutions that transform preferences through reasoned dialogue rather than just economic calculation (O'Neill 2017: 324). However, as long as political institutions take different forms in various parts of the world, concern for future generations leads to different binding commitments at national and global levels. A crucial empirical question is thus how the responsibility towards future generations is formulated in public documents from political institutions?

3. The Norwegian Petroleum Fund

The Sovereign Wealth Fund Institute (2018) ranks the Norwegian Petroleum Fund as the world's largest wealth fund followed by similar funds in China, Abu Dhabi,

Kuwait and Saudi Arabia. The distinctive aspect of sovereign wealth funds, that sets them apart from other vehicles of investment, is their state ownership. This means they have a longer-term horizon for their investments than other investors. As Bolton et al. (2012) argues this also implies broader social welfare objectives, such as the conservation of nature rather than solely maximisation of financial returns. According to the Sovereign Wealth Fund Institute (2018), around 40 sovereign wealth funds were created between 2005 and 2018 and most countries with sovereign wealth funds are resource-rich countries with mainly oil as their natural resource.

Sovereign wealth funds have mainly been studied by economists with a central concern for how the funds' investments influence international stock markets. A recent literature review concludes the funds' motives are mainly maximisation of financial returns rather than national political interests (Alhashel 2015). There are also politically motivated contributions such as Lansley's (2016) suggestion to establish social wealth funds as a political tool to reduce economic inequality. He refers to the Alaskan Permanent Fund established in 1976 as a good example. Nevertheless, Lansley (2016: 41-54) suggests the Norwegian Petroleum Fund is the nearest to an ideal model measured in terms of the criteria of transparency, public accountability, the nature of investments and how the proceeds are spent and distributed.

The Norwegian Petroleum Fund consists of four types of revenues the state receive from petroleum production. Firstly, this income includes tax from the oil companies, which is composed of an ordinary company taxation of 24 per cent plus a special tax of 54 per cent. Secondly, there is an income from the State's Direct Financial Interest, known as Petoro since 2001, which is a system under which the state owns holdings in several oil and gas fields, pipelines and onshore facilities. Thirdly, there are revenues from direct state ownership in Statoil, known as Equinor since May 2018, in which the state owns 67 per cent of shares. Finally, there are area fees and environmental taxes (Norwegian Petroleum 2018). By the end of 2017 the fund's asset allocation was 65.9 per cent equities, 31.6 per cent fixed income investments and 2.5 per cent unlisted real estate (NBIM 2018a). In the period from 1998 to 2016 the average annual return on investment was 5.7 per cent (Meld. St. 26 (2016-2017)). Moreover, one in seven Norwegian Krone spent on public sector budgets in 2017 was allocated from the expected return of the fund (NOU 2017: 13; 93-94). Today, the fund is of considerable importance to the Norwegian welfare state, but it has taken some decades to get there.

3.1. Moderation in oil extraction (1974 – 1983)

At the turn of the 1970s, when Norwegian oil production was beginning, Norway was economically an average country in the industrialised world in terms of OECD measures (Schiefløe 2017). The politicians' aim of keeping national control over petroleum production was based on the idea that natural resources belong to the people (Lie 2012: 143-146). A parliamentary report from 1974 (that laid the foundation for Norwegian petroleum production) repeated this position on common

property rights several times. The politicians foresaw that petroleum extraction would lead to important changes in Norwegian society:

Democratically elected institutions must have full control of all the important aspects of petroleum policy: exploration, rate of extraction, safety measures and localisation (St. Meld. 25 (1973-74): 9, My own translation).

Whereas the parliamentary report opened up engagement in the exploration and production stages to private enterprises, the politicians emphasised their aim was to 'place them under public control' (St. Meld. 25 (1973-74)). The report expected the government's revenues from petroleum activities to come from both the state's direct participation in production, and the taxation of the earnings of the private oil companies. Moreover, the politicians assumed it would be necessary to invest part of the income from petroleum activities outside Norway, to make sure petroleum wealth would remain for the benefit of future generations after the oil reserves have been exhausted. The parliamentary report emphasised that economic growth must be balanced in such a way that the use of resources does not destroy the environment (St. Meld. 25 (1973-74)). In the 1970s, there was a political consensus that Norway should adhere to a moderate pace of extraction of petroleum resources (Lie et al. 2016). There were no explicit references to sustainable development, but the entire report was characterised by a perspective that emphasised the need to take environmental considerations into concern when oil extraction was discussed.

The government appointed *Tempo Commission* from 1983 concluded one should base the choice of the speed for petroleum production on a broader understanding of how political and institutional systems work (NOU: 1983: 27: 88). While the establishment of a fund was not explicitly suggested by this Commission, it mentioned a fund could be a buffer between fluctuating revenues from oil production and the more permanent expenditures of the state budget. The idea was that it was necessary to protect Norwegian society from the consequences of fluctuations in oil prices. Moreover, the Tempo Commission argued that if the investments were made abroad one would separate these investments from the Norwegian economy and should, in principle, be able to continue to obtain financial returns in the future (NOU: 1983: 27). This was a debate about how to separate the Norwegian mainland economy from offshore oil production, but the fund would simultaneously be a means of saving money in foreign accounts for use by future generations.

3.2 Introduction of the national wealth model (1984-1990)

A parliamentary report from 1984 introduced the *national wealth model* to evaluate the use of petroleum resources (St. Meld. 32 (1984-85)). The report operationalised this wealth in terms of four forms of capital: natural capital, human capital, fixed real capital and financial capital. All these four forms of capital were converted into a monetary equivalent, and the model assumes substitutability between different forms of capital. This model made it possible to measure how one could offset a decrease

in natural resources by an adequate increase in financial capital (Langhelle and Ruud 2012: 176).

By applying the national wealth model, politicians introduced an understanding of petroleum reserves in terms of weak sustainability and thus as a natural resource that one could convert into financial capital:

If annual consumption of petroleum revenues is lower than annual income, some of the revenues may be invested in other property assets. One will then over time build up other forms of wealth. This wealth could be regarded as a conversion of the petroleum wealth. Such a wealth will, when the period of oil extraction is over, provide a basis for taking advantage of petroleum revenues in the future ((St. Meld. 32 (1984-85): 74. My own translation).

The report raised the question of whether the return from leaving the petroleum below the seabed would be greater than producing the petroleum and investing the revenues from this production in financial assets ((St. Meld. 32 (1984-85): 74). These evaluations were based only on economic considerations in terms of risks of various investments. With the introduction of a national wealth model, politicians used the metaphor conversion of non-renewable resources to financial wealth. The alternative that it might be crucial for future generations to have access to non-renewable petroleum wealth was not considered as a part of this model.

A government appointed commission, the *Steigum Commission*, from 1988 referred explicitly to the Brundtland report's (1987) definition of sustainable development. It applied the concept of sustainable development to the national wealth model and argued one should treat the risks of extensive damage to the natural environment in a similar manner to other economic risks. In line with strong sustainability, the Commission asserted that contemporaneous scientific knowledge suggested that if economic growth, the use of fossil fuels and pollution continued in the same way, the world would risk unacceptable and perhaps irreversible degradation of the environment (NOU 1988: 21: 70). Moreover, the Commission recommended that decision makers consider how economic activity could lead to disadvantages for others, not only in the form of polluted air, water and soil, but also due to the loss of non-renewable resources (NOU 1988: 21: 77, 85). Nevertheless, in common with the parliamentary report from 1984, the Steigum Commission recommended converting petroleum wealth into financial investments abroad in line with a concept of weak sustainability (NOU 1988: 21: 65-96).

Two years later, the government applied a national wealth model to legitimise the establishment of a Petroleum Fund (Ot. Prp. 29 (1989-90)). The government gave three reasons for the establishment of a fund. One was uncertainty related to the state's future revenues from petroleum activity. The second was that revenues from petroleum activity would not lead to the same domestic economic demand as other

types of state income. The third reason was that the transfer of revenues from petroleum production to a fund would counterbalance the reduction of petroleum wealth. The argument was that the transfer of revenues from petroleum production to a petroleum fund would prevent the decline of petroleum reserves reducing Norwegians' common national wealth (Ot. Prp. 29 (1989-90)). The central idea was based on weak sustainability and that one could offset the decrease in non-renewable resources such as oil and gas with an adequate increase in financial capital.

The Government Petroleum Fund Act (1990) formulated the purpose of the fund as pursuing long-term considerations by using petroleum revenues. The fund should consist of revenues the state receive from petroleum production and the return on the financial capital invested in the fund. The financial capital in the fund should not be used for consumption without a decision in parliament.

3.3 A financial fund for the present and the future (1991 – 2006)

In 1998, the government delegated management of the fund to a separate operational entity in the central bank, Norges Bank Investment Management (NBIM). During the first six years after the turn of the century, three policy measures were introduced.

Firstly, in 2001 the *fiscal rule* was introduced (St. Meld.no. 29 (2000-2001)). According to the fiscal rule the state cannot spend more than the equivalent of the expected financial return adjusted for inflation of the fund, which was estimated at four per cent until 2017, when it was reduced to three per cent. The argument for introducing this rule was that the fund's capital had increased so much that the politicians found it important to separate the revenues from petroleum production from welfare provisions. Such separation would prevent fluctuations in use of petroleum revenues leading to changes in the Norwegian economy and thereby the welfare services. The aim was to prevent an overheated economy by phasing petroleum revenues gradually into the Norwegian economy and redistributing the capital over several years (St. Meld.no. 29 (2000-2001)). The arguments were formulated in economic terms in line with a national wealth model, which was introduced in the mid-1980s. The environmental domain was perceived as natural capital that in line with a weak concept of sustainability could be substituted by financial capital:

The Petroleum Fund is based on extraction and sale of a non-renewable natural resource. Through the Petroleum Fund it is possible to build up an alternative wealth that can provide a return over a longer period, and from which future generations can benefit (St. Meld. 29 (2000-2001): 4. My own translation).

As the income from petroleum production increased, the pressure to increase the use of funds for welfare provisions became stronger. As Lie (2015) argues, with the fiscal rule, the politicians presented savings for future generations as a good purpose that

could contend with all other good purposes competing for attention and support. Lie (2015) sees this as a moral appeal that is understandable and is also in harmony with challenges and discussions about other long-term societal challenges (Lie, 2015: 235). The fiscal rule was very soon accepted by all political parties and the Norwegian public. By introducing this rule, petroleum production would not lead to increased spending in the state budget, and thereby lead to instability in the Norwegian economy. The fiscal rule had a simplicity and a moral anchor linked to the concerns for future generations.

Secondly, parliament decided on *ethical guidelines* for the management of the fund in 2004 (St. Meld. 2 (2003-2004)). This decision followed the recommendations from the government appointed Graver Commission (NOU: 2003: 22; Graver 2004). This Commission recommended basing ethical guidelines for the Petroleum Fund on two foundations. The first was to define the Petroleum Fund as a means of ensuring future generations would have a fair share of the country's petroleum wealth. This implied the financial wealth should be managed to provide good returns over the long-term. The Commission's argument was based on the understanding of environmental degradation and poverty as the two most important challenges to the world economy. It argued this would make it necessary – and an ethical duty – to promote sustainable development globally (NOU: 2003: 22; Graver 2004). Both the Graver Commission and the politicians applied a weak concept of sustainability (St. Meld. 2 (2003-2004)). The Graver Commission's second ethical foundation was also followed up by the government. The fund should not make investments which resulted in unethical acts or omissions such as violations of basic humanitarian principles, gross human rights violations, gross corruption or serious environmental degradation (St.meld.no. 2 (2003-2004), p. 69). With these ethical guidelines, investments should take environmental, economic and social considerations into account. However, these guidelines are applied after petroleum production is fulfilled and the question is how to invest the income from petroleum sales?

Thirdly, in 2006 the *Government Pension Fund Act* (Ot. Prp. 2 (2005 – 2006)) replaced the act from 1990. The new act placed the Government Petroleum Fund and the National Insurance Scheme Fund, *Folketrygdfondet*, under one common umbrella; the *Government Pension Fund*. Although the Petroleum Fund was renamed the Government Pension Fund Global (GPFGL), no changes were made to key provisions on the handling of petroleum revenues. It is thus problematic to compare with other pension funds (Brooks 2017). The background was that the state's expenditure on pensions would increase in the future, whereas income from petroleum activities would decrease (NOU 2004: 1). While there was general concern about the demographic shift, there were no political decisions concerning whether and when the fund should be used to cover future pension costs (Innst. S. 195 (2004-2005)). The politicians' idea behind the renaming seems rather to have been to send a message to the population that they had long-term goals for the use of petroleum revenues.

With these three policy measures the economic, ethical and long-term legitimization of the investments were in place – and the government could increase petroleum production without any fundamental critique. The question of whether to extract petroleum, and the importance of the non-renewable resources as critical natural capital were absent from the discussion.

3.4 Increased income and new protests (2007 – 2019)

In contrast to the previous periods this recent period is characterised by a rapidly increasing income from the oil and gas production. The fund's total market value increased from around NOK 2 000 billion in 2007 to around NOK 10 000 billion in 2019, equivalent to more than one trillion US Dollars (NBIM 2019a). In 2016, the return from the fund exceeded current petroleum revenues for the first time (NOU 2017: 13: 93). The expected annual return was on a par with the value added of Norway's manufacturing industry as a whole. Norwegian welfare state provisions became gradually more dependent on the fund. As mentioned above, one in seven Norwegian Krone spent on public sector budgets in 2017 was allocated from the expected return of the fund (NOU 2017: 13; 93-94). While ecological aspects were nearly absent from public documents on the petroleum fund, new and increasing protests from the Norwegian public were related to both the ethical aspect of investments in the Fund and petroleum production in the High North.

The political idea that investments in the fund could be separated from petroleum activities had already paved the way to discussing the fund primarily as an economic activity. In 2015, the government appointed *Thøgersen Commission* was mandated to evaluate the fiscal rule, and it concluded the fiscal rule's emphasis on the interests of future generations gives fiscal policy a moral anchor which has probably made it easier for politicians to advocate sustainable petroleum revenue spending (NOU 2015: 9: 16). Yet, the Commission recommended a reduction in the use of petroleum revenues for the state budget.

The government appointed *Mork Commission* was mandated to assess the equity share of the fund in relation to the aim of the fund, its time horizon, size and expected use (NOU 2016: 20). It argued the risk arising from an increased equity share might come into conflict with the desire to preserve the community's income from oil and gas for future generations. Nevertheless, the Commission recommended an increase of the equity share from 60 to 70 per cent. The Commission applied a national wealth model, and argued a significant part of the value of the petroleum wealth in the ground has over the last few decades been converted into financial wealth (NOU 2016: 20: 7).

In 2016, the government devoted an entire chapter in a parliamentary report to explaining how the national wealth model is applied to investments in the fund (Meld. St. 26 (2016-2017)). While this confirms how important the national wealth model has been for understanding the Petroleum Fund as savings for future generations,

discussions about what future generations need are almost absent. One assessment is made:

Should the composition of the investments in the GPFG be changed if future generations have different leisure preferences to the current generation? At the time of the creation of the GPFG, it was pointed out that oil revenues represent non-renewable natural resources, and savings in the fund aim to allocate these resources evenly across generations. The savings in the fund are thus motivated by the interest of a fair distribution of petroleum wealth across generations, but not consumption smoothing between generations (Meld. St. 26 (2016-2017):113. My own translation).

While there are some speculations of what future generations will prefer, there is no discussion of their need for functional ecological systems. Saving of financial capital is seen as a compensation for the depletion of non-renewable fossil fuels, rather than defining specific characteristics required of an intergenerational compensation (See Spash 2002: 226-231).

The fund investments are a profit-maximising activity according to the government appointed *Gjedrem Commission* from 2017 (NOU 2017: 13). This Commission recommended separating the management of the fund from Norges Bank and establishing a separate statutory entity to manage the fund. These recommendations were based on a number of assessments of good government models (NOU 2017: 13: 27-28). These are interesting for two reasons related to savings for future generations. Firstly, the Commission argued the fund's profit-maximising activity requires a high degree of legitimacy and credibility among the Norwegian people. This legitimacy could be strengthened by the fund's role as a source for financing the welfare state across generations (NOU 2017: 13: 482). Secondly, the Commission saw the fund as national wealth which should be managed by democratic institutions. The idea was that wealth belongs to the people and should be managed by representatives of the people and in line with public administrative traditions that are widely accepted in the Norwegian population (NOU 2017: 13: 27-28).

The concern for environmental degradation is seldom reflected in public documents dealing with the Petroleum Fund. Some considerations were made by the government appointed *Skarcke Commission* from 2018, which had the task to assess climate-related risk factors and their significance for the Norwegian economy (NOU 2018: 17). With a narrow economic approach the commission saw an effective global climate policy as one crucial risk, as the Commission believed this would reduce the value of Norway's remaining petroleum reserves (NOU 2018: 17: 76). Based on the idea of weak sustainability, the Commission argued that through the build-up of the fund, petroleum wealth in the ground has been converted into broadly-based investments and this has led to a considerable risk diversification (NOU 2018: 18: 93). The national wealth model based on the idea of value commensurability had become a basis for how experts, bureaucrats and politicians used the metaphor that

they convert non-renewable national resources in the North Sea into financial assets abroad.

However, there is a political debate in Norway whether investments in environmentally friendly projects can compensate for the environmental degradation caused by petroleum activity. As discussed above, the ethical guidelines have been in place since 2004 (Norwegian Government Pension Fund 2018). In line with recommendations provided by the Ministry of Finance and the Council on Ethics appointed by the ministry, the NBIM is responsible for the investments. NBIM is a global investor with minority ownership in more than 9000 companies in 73 countries. It performs annual assessments in which it gathers information and analysis in three focus areas: children's rights, climate change and water management (NBIM 2019a). According to NBIM's report on responsible investments its mandate is to invest between NOK 30 and 60 billion in environment-related mandates. At the end of 2017, it had NOK 67.8 billion invested in the equities of 206 companies under this mandate, and NOK 7.1 billion invested in green bonds (NBIM 2018b: 70). With the aim of making the government's wealth less vulnerable to a permanent drop in oil and gas prices, NBIM (2017b) recommended the removal of oil stocks from the benchmark index of the fund in 2017. In March 2019, the government followed this advice.

These numbers show the percentage of the fund invested in environmentally friendly activities is relatively low. NBIM is an investor, and as such, it defines its mission as *to safeguard and build financial wealth for future generations* (NBIM 2018b). Moreover, there is a broad agreement among politicians that the fund should not be used as an instrument of foreign policy, business policy, regional policy or environmental policy (NOU 2017: 13). One central argument is the fund shall not become a government budget number two for purposes that are not prioritised in the annual budget process. Due to the size of the fund, some scholars have questioned whether management of the fund can be as disconnected from the country's foreign policy as the politicians want (Sverdrup 2016; Bøås 2016). As the ethical guidelines are applied after petroleum production is fulfilled, the question is not whether to extract the petroleum, but rather how to invest the income from petroleum activity (see Graver 2004)? Nevertheless, ethical investments can never fully compensate for the environmental consequences of the extraction of oil and gas. These are critical natural capital that cannot be treated as a commodity (Claro 2007; O'Neill 2017). Financial compensation cannot compensate for the environmental damages that are inflicted on future generations by the use of oil and gas. While welfare payments are made on grounds of equity, environmental damages cannot be compensated in the form of capital investments (Spash 2002: 226-231). Acknowledging the irreversibility and uncertainties of ecological systems would lead to precautionary policy making regarding the use of natural capital.

Due to climate change and the vulnerability of areas in the High North, there is a heated public debate in Norway over whether the country should phase out petroleum production and not search for more oil and gas in these areas. Norway is one example of only a few countries which have included concerns for future generations in their constitutions (UN 2013). Paragraph 112 in the Norwegian constitution asserts every person has the right to an environment that is conducive to health and to a natural environment whose productivity and diversity are maintained. Moreover, it states natural resources shall be managed on the basis of comprehensive long-term considerations which will also safeguard this right for future generations (LovdataPro 2019). Greenpeace and Nature and Youth Norway have sued the Norwegian state for violating the Constitution's article 112. The central theme was the awarding of exploration licences for oil and gas in the Barents Sea in the consideration of future generations. Neither the first trial in the Oslo district Court in November 2017 nor the second trial in the Appeal Court in November 2019 succeed, and they have appealed the case to the Supreme Court of Norway (Greenpeace 2020).

4. Conclusion

In Norway, the idea that the current generation should not empty the North Sea of oil and gas without saving something for future generations has been a politically established norm since the 1970s. This responsibility is constituted by the idea that natural resources belong to the people, both current and future Norwegians. Over time, the understanding of how to save has changed. The idea of weak sustainability and value commensurability have increasingly come to dominate the argumentation in public documents dealing with the Petroleum Fund.

Public documents from the 1970s and 1980s entailed broad political assessments of how oil production would influence Norwegian society. The experts, bureaucrats and politicians all emphasised the need for moderation in oil extraction. They argued that the petroleum activity must be balanced in such a way that the use of resources neither leads to an overheated economy nor destroys the environment. The possibility of establishing a Petroleum Fund was not a theme.

In the mid 1980s the national wealth model was introduced as a tool to understand and manage petroleum reserves. Since then, this model has formed the basis for describing the Petroleum Fund as savings for future generations. Based on a concept of weak sustainability, this model makes it possible to consider the various forms of capital as substitutable. This model laid the foundation for the political idea that the non-renewable petroleum reserves in the North Sea could be converted into financial assets abroad. The current generation would thereby save in the fund for future generation.

The Petroleum Fund was established 1990. During the following two decades, three policy measures were introduced, which legitimated the fund in economic, ethical and

long-term aspects. By introducing the fiscal rule, the politicians set a limit for how much of the fund the state could use for welfare provisions. Increased petroleum production would therefore not lead to an overheated Norwegian economy. With the ethical guidelines, the investments were taking the future generations and the environmental, economic and social considerations into account. By the renaming to the Government Pension Fund Global, the politicians demonstrated that they had long-term ideas for the investments in the Fund. However, these policy measures include neither considerations about whether petroleum extraction is the basis for the fund nor the environmental damages caused by the use of fossil fuels. Also in this period, the idea of value commensurability laid the basis for the view of savings in financial assets abroad for future generations.

Since the mid 2000s the Norwegian state's income from oil and gas production has increased dramatically. In 2016, the return from the fund exceeded current petroleum revenues and the Norwegian welfare state provisions became gradually more dependent on the fund. The political idea that investments in the fund could be separated from petroleum activities had already paved the way to discussing the fund primarily as an economic activity. Although, increasing protests in the Norwegian public were related to both the ethical investments in the Fund and petroleum production in the High North, such aspects were mostly absent from public documents on the petroleum fund.

These four periods show that over time, ecological aspects have disappeared from public documents dealing with the Petroleum Fund and mainly economic assessments characterise the reasoning. These assessments are based on the concept of weak sustainability and value commensurability (Figge 2005; O'Neill 2017). The idea is that the Norwegian state's use of non-renewable natural capital is sustainable as long as the financial assets abroad are augmented accordingly. When experts, bureaucrats and politicians present the Petroleum Fund as savings for future generations, it is portrayed as a moral act of extracting oil and gas in the North Sea to save financial investments abroad for future generations. In this perspective, the reduction of non-renewable fossil fuels is described as something good as it is seen as a way of raising future welfare.

Although the government has a long-term perspective for the petroleum fund, the stock market crash related to the uncertainty of the coronavirus pandemic shows that there is no guarantee that the fund will ensure future welfare. Moreover, this approach to sustainability leaves out important discussions about compensation for harm to the environment caused by the use of fossil fuels (Spash 2002). Furthermore, it overlooks what is emphasised in terms of strong sustainability that a minimum compensation for depletion of fossil fuels or damages made to the environment would require ecological systems to be maintained in such a way that future generations can meet their needs (Gough 2017). In this perspective, it is possible that future Norwegian

generations will prefer to have oil and gas on the seabed more than a financial Petroleum Fund to cover payment of pensions.

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